IN THE CLAIMS:

Please amend claims 4-8 as follows:

- 1. (Withdrawn) A microarray chip comprising a plurality of spots arranged in a predetermined positional relationship, wherein some of the plurality of spots provide index information for specifying the microarray chip.
- 2. (Withdrawn) A microarray chip comprising a plurality of element spots arranged in a predetermined positional relationship, wherein spots which provide index information for specifying the microarray chip are positioned along with the element spots.
- 3. (Withdrawn) A microarray chip according to claim 1 or 2, wherein the spots which provide index information include spots containing a detective colorant and spots free of the detective colorant as to give index information by the presence or absence of the detective colorant.
- 4. (Currently Amended) A method for indexing a microarray chip with a plurality of spots arranged in a predetermined positional relationship thereon, comprising:

selecting some of the plurality of spots as index spots;

spotting at least one biological element onto one of remaining spots as a non-index spot;

indexing the microarray chip spotted with said on chip element biological element by selectively providing at least one kind of detective colorant onto the index spots based upon index thereby coding in the index spots a unique microarray index value, said microarray index value being linked to element information[[,]] which includes a type of said on chip element biological element and a corresponding location of said non-index spot on the chip; and

automatically automatedly identifying the microarray chip by detecting said detective colorant provided on said index spots.

5. (Currently Amended) A method for indexing a microarray chip with a plurality of spots arranged in a predetermined positional relationship thereon, comprising:

selecting some of the plurality of spots as index spots;

spotting at least one biological element onto one of remaining spots as a non-index spot;

indexing the microarray chip spotted with said on chip element biological element by selectively providing at least one kind of detective colorant onto the index spots based upon index thereby coding in the index spots a unique microarray index value, said microarray index value being linked to element information which includes a type of said on chip element biological element and a corresponding location of said non-index spot on the chip; and

reproducing the <u>index element</u> information by detecting the presence or absence of said detective colorant provided on the index spots thereby <u>automatically</u> <u>automatedly</u> identifying the microarray chip.

6. (Currently Amended) A method of indexing a microarray chip according to claim 5, wherein the index spots are arranged in a two-dimensional matrix including some of the index spots designated as parity spots and provided with said detective colorant based upon a parity algorithm running by row and by column of the matrix, and

upon reproducing the <u>index element</u> information, the parity spots are checked for errors.

7. (Currently Amended) A method for indexing a microarray chip according to claim 4, further comprising the steps of:

constructing a database for storing an element information record, a microarray chip master record, and an on-chip element a biological element information record;

recording information of said on-chip-element biological element on the element information record with an element index;

recording information of the microarray chip on the microarray chip master record with a microarray index;

recording, on the on-chip-element biological element information record, information of the microarray index, said corresponding location of said non-index spot on the microarray chip, said element index of said on-chip-element biological element spotted on said corresponding location, and information of experiment conducted and

measurement taken in said non-index spot;

linking the microarray chip with the microarray chip master record as well as the on-chip element biological element information record via the microarray index coded in the index spots; and

linking the on chip element biological element information record with the element information record via the element index.

8. (Currently Amended) A method of indexing a microarray chip according to claim 4, wherein some of the index spots are designated as parity spots and provided with said detective colorant based upon a parity algorithm, and

upon reproducing the <u>index</u> <u>element</u> information, the parity spots are checked for errors.